



2017

AMA REPORT CARD ON INDIGENOUS HEALTH

A NATIONAL STRATEGIC APPROACH TO ENDING CHRONIC OTITIS MEDIA AND ITS LIFE LONG IMPACTS IN INDIGENOUS COMMUNITIES



FOREWORD

AMA PRESIDENT, DR MICHAEL GANNON

Addressing Indigenous Disadvantage – Step by Step

For 15 years, the AMA has been shining the national political and social spotlight on Indigenous health and disadvantage with its Report Cards on Indigenous Health.

Some of our Report Cards have addressed the bigger picture around funding, building capacity, workforce, primary care best practice, and institutionalised inequity in the health system.

Others have dealt with particular sectors of health care such as child health, men's health, imprisonment rates, or programs for mothers and babies.

More recently, we have put the focus on specific diseases or defined areas of health need – a step by step approach that does not ignore the social determinants of health, but offers tangible solutions to major health problems.

Last year, our Report Card was a call to action on Rheumatic Heart Disease (RHD), which set out specific targets and actions for all our governments to work together on to eradicate this entirely preventable but devastating disease.

In 2017, we shift our focus to ear health in Aboriginal and Torres Strait Islander communities – with a special emphasis on chronic otitis media, which in its worst form can lead to a 'life sentence' of harm.

For most Australians, otitis media is nothing more than a mild case of childhood middle ear infection. It is readily and easily treated, and poses no long-term threat.

But, left untreated, it can lead to permanent hearing loss.

The Australian Indigenous population is reported to suffer the highest rates of otitis media in the world.

We must put an end to this preventable scourge on the health of Aboriginal and Torres Strait Islander Australians.

This Report Card explains the problem and provides practical, achievable solutions to the problem.

The AMA will present the Federal Government our recommendations to end the devastating impact of chronic otitis media in our Indigenous communities, and urge cooperation among all our governments and all levels of government to fix the problem.

At the same time, the AMA will continue to work with governments and other stakeholders on the ongoing work set out in all our Report Cards since 2002 – not the least being the need for more funding, addressing the persistent inequities, and the social determinants of health.

Indigenous health has always been and will always be a priority for the AMA. We will do all in our power to ensure it remains a policy priority for all our governments – and an issue that remains prominent in the minds of all Australians.

We can do better. We must do better.



Dr Michael Gannon

President, Australian Medical Association
November 2017

EXECUTIVE SUMMARY

Chronic diseases are a leading cause of the gap in life expectancy between Aboriginal and Torres Strait Islander people and non-Indigenous Australians.

Indigenous children experience some of the highest rates of chronic suppurative otitis media (CSOM) in the world.

Chronic otitis media is linked to poorer social determinants of health, such as: poverty; unhygienic, overcrowded conditions; and an absence of health services. It is a disease of the developing world. It should not be a chronic health problem in a highly-developed country like Australia.

Otitis media is caused when fluid builds up in the middle ear cavity and becomes infected.

For most non-Indigenous Australian children, otitis media is readily treated. The condition passes within weeks, and without long-term effects. But for many Aboriginal and Torres Strait Islander children, otitis media is not adequately treated.

It persists in chronic forms over months and years. Estimates show that, on average, an Indigenous child will endure middle ear infections and associated hearing loss for at least 32 months, compared with just three months for a non-Indigenous child, from age two to 20 years.

Chronic otitis media among Australia's Aboriginal and Torres Strait Islander infants and children is not a hidden or unknown health problem.

This AMA report shows the unacceptably high prevalence of otitis media has been known for at least 60 years.

Yet today, despite more than two decades of advances in medical services and treatment, and a range of government responses, chronic otitis media remains not only an endemic 'massive health problem' in many Indigenous communities, but rates are now reported to be the highest in the world.

Alarming, chronic otitis media in infancy and childhood can affect Indigenous peoples' adult health and wellbeing as much as cardiovascular disease or diabetes, and its effects are significant 'life sentences' of disability.

It has life-long impacts that bring greater risk of a range of adult social problems, not the least of which is incarceration.

This Report Card calls for a national, systematic approach to closing the gap in the rates of chronic otitis media between Indigenous and non-Indigenous infants and children in Australia, and a response to the lasting, disabling effects and social impacts of chronic otitis media in the Indigenous adult population. Key elements of this approach are:

- An analysis of current approaches to identify the reasons why the chronic otitis media crisis persists. It is critical to begin the development of a national strategy with a clear sense of the adequacy or otherwise of existing services and programs and, particularly, what needs to be changed or reinforced,
- Embedding chronic otitis media and hearing loss in the COAG *Closing the Gap* strategy,
- An increased focus on prevention - both primordial prevention with a focus on the social determinants of the disease, and primary prevention including family and community health literacy about otitis media, and
- Access to ear, nose, and throat (ENT) specialists, particularly with ACCHS and other Indigenous-specific primary health care services, based on need.

Further, it is time for clarity about the range of chronic otitis media-related social impacts on the Indigenous population, and to recognise that these impacts are of an entirely different magnitude and range to those experienced by the non-Indigenous population.

The recommendations in this Report Card also round off nearly a decade of AMA advocacy in relation to reducing Indigenous imprisonment, and extend the AMA's 2015 Report Card's analysis of Indigenous imprisonment as a health issue. The association of chronic otitis media-related hearing loss and the high rates of Indigenous imprisonment has been noted for more than 25 years now – but with little action evident.

Australian governments have responded to chronic otitis media in Indigenous communities for more than two decades now, and with increasing levels of investment. But chronic otitis media has still managed to entrench itself as a 'massive health problem' in too many Indigenous communities.

It is the right of every Australian child to have the best start in life. The AMA hopes that this Report Card will build momentum for a national strategic approach to address chronic otitis media and the contributions of related developmental factors and hearing loss to many areas of Indigenous disadvantage - a 'missing piece of the puzzle for Indigenous disadvantage'.

We urge the Australian Government to draw a line under the persistent and ignominious chronic otitis media health crisis that blights too many of our Indigenous communities.

Recommendation 1:

That a coordinated national strategic response to chronic otitis media be developed by a National Indigenous Hearing Health Taskforce under Indigenous leadership for the Council of Australian Governments (COAG). This should build on and incorporate existing national and State and Territory level responses.

Recommendation 2:

That the national approach proposed in Recommendation 1 include addressing the wider impacts of otitis media-related developmental impacts and hearing loss, including on a range of areas of Indigenous disadvantage such as through the funding of research as required.

Recommendation 3:

That attention of governments be re-directed to the recommendations of the AMA's 2015 Indigenous Health Report Card, which called for an integrated approach to reducing Indigenous imprisonment rates by addressing underlying causal health issues (including otitis media and related hearing loss and developmental impacts), with the expectation of appropriate action. The health issues to be addressed include mental health problems, cognitive disabilities, alcohol and drug problems, hearing loss, and developmental impacts associated with otitis media.

PART 1

INTRODUCTION AND RECOMMENDATIONS

There is nothing hidden about the alarming rates of chronic otitis media among Australia's Aboriginal and Torres Strait Islander (Indigenous) infants and children. Reports of unacceptably high prevalence have been made for at least 60 years - as set out in Text Box 1. Yet today, despite more than two decades of medical advances and government responses, chronic otitis media remains not only an endemic 'massive health problem' in many Indigenous communities, but rates are now reported to be the highest in the world.¹

About eight in 10 of the world's infants and children will be affected by otitis media at some time.² In otitis media, fluid builds up in the middle ear cavity and can become infected. While the condition lasts, mild or moderate hearing loss is experienced.

For most non-Indigenous Australian children, otitis media is readily treated. The condition passes within days or weeks and without long-term effects. In contrast, in many of Australia's Indigenous communities, otitis media is not readily treated. Instead, it persists in chronic forms over months and years with life-long impacts that bring greater risk of a range of adult social problems, not the least being imprisonment.

FIND OUT MORE ABOUT OTITIS MEDIA

To find out more about otitis media as a spectrum of disease - including chronic forms such as chronic suppurative otitis media (CSOM), the form most associated with permanent hearing loss, see Appendix 1.

Chronic otitis media, in contrast to acute or episodic forms of the disease, sinks deep roots in communities with poorer social determinants of health: poverty; unhygienic, overcrowded conditions; and an absence of health services. It is a disease of the developing world, not 21st century highly-developed nations.

Chronic diseases are known to be the main cause of the Indigenous and non-Indigenous health and life expectancy gap in Australia, and are usually thought of as affecting middle aged or older Indigenous people. But chronic otitis media might be only the first of many potentially disabling chronic disease challenges across the life course of an Indigenous person, and it may strike within weeks or months of birth.

In fact, chronic otitis media in infancy and childhood can impact on Indigenous peoples' adult health and wellbeing as much as cardiovascular disease or diabetes:

- First, because months and years of critical hearing-dependent infant/child brain development stages can be spent with mild or moderate hearing loss while the ears remain infected. As discussed further on in Part 2, while hearing itself can return with the eventual passing of the disease, the brain's capacity to process sound waves into understandable sounds (auditory processing) and the associated development of language and communication skills can be permanently impacted and set back, and
- Second, because permanent hearing loss from infancy and childhood onwards can be caused by chronic forms of the disease, particularly chronic suppurative otitis media (CSOM), a form of what is often referred to as 'runny ears'.

Both these effects are significant 'life sentences' of disability - although until recently it has been hearing loss, a more obvious disability, that has received the most attention.

The AMA believes that it is time Australia - one of the healthiest and wealthiest countries in the world - draws a line under the persistent and ignominious chronic otitis media health crisis occurring in too many of our Indigenous communities.

Specific measures for otitis media required include re-framing otitis media as a chronic condition, at least in an Indigenous context, and not mistakenly approaching it as an episodic or acute condition (as it generally occurs in the non-Indigenous population). This shift in mindset is also important because framing otitis media as a chronic condition includes the implicit understanding that the health system alone cannot carry the sole burden of an effective response. It is also critical that a systematic response to the social determinants of the disease occur - in particular, to address the poor housing and health infrastructure that underpins the progression of otitis media to chronic forms in many Indigenous communities.

Further, the AMA believes it is time for clarity about the range of chronic otitis media related social impacts on the Indigenous population and to recognise that these impacts are of an entirely different magnitude and range to those experienced by the non-Indigenous population.

This Report Card calls for a national, systematic approach to closing the gap in the rates of chronic otitis media between Indigenous and non-Indigenous infants and children in Australia, and a response to the lasting, disabling effects and social impacts of chronic otitis media in the Indigenous adult population.

Text Box 1: Sixty years of reports about CSOM in Indigenous communities

- A 1957 article by the Western Australian Deputy Commissioner of Public Health is believed to be the first reference to CSOM in Indigenous children in Australian medical literature.³ Articles in the 1960s continued to draw attention to the issue.
- Moran's 1979 report on the health of more than 60,000 Aboriginal people in 465 communities screened by the National Trachoma and Eye Health Program found 29 per cent had eardrum scarring, and 18 per cent of children under four years of age had CSOM.⁴
- In 1996, the World Health Organization (WHO) reported CSOM in 12 to 25 per cent of Australian Aboriginal people - the second highest rate in the world known at that time.⁵ Further, it characterised such rates as a 'massive health problem' - defined by the WHO as CSOM rates of four per cent and higher within a population, and requiring urgent attention.⁶
- A 2001 survey of children under three years of age living in 29 remote Aboriginal communities in the Northern Territory reported 24 per cent with CSOM.⁷
- In 2004, the WHO again identified Australian Aboriginal people as among population groups with the highest rates of CSOM in the world.⁸
- Over 2009 to 2012, around 12 per cent of the approximately 5,700 Indigenous children checked under the Northern Territory Emergency Response Child Health Check Initiative had CSOM.⁹

Recommendations

Recommendation 1 of this Report Card, for a national strategy to address chronic otitis media in Indigenous communities, also sets out what the AMA sees as six essential elements of such a strategy.

Recommendation 1:

That a coordinated national strategic response to chronic otitis media be developed by a National Indigenous Hearing Health Taskforce under Indigenous leadership for the Council of Australian Governments (COAG). This should build on and incorporate existing national and State and Territory level responses and include:

- A critical analysis of current approaches, and to identify the range of reasons that current chronic otitis media crisis persists,
- The development of a COAG Closing the Gap target about new cases of chronic otitis media and hearing loss in Indigenous infants and children under 12 years of age,
- A national otitis media surveillance program to monitor prevalence and support a targeted and cost-effective national response,
- A significantly increased focus on prevention - both primordial prevention with a focus on the social determinants of the disease, and primary prevention including family and community health literacy about otitis media,
- A central, adequately funded and supported role for primary health care and Aboriginal Community Controlled Health Services (ACCHS) in a systematic approach to the prevention, detection, treatment, and management of otitis media, and
- Access to ear, nose and throat (ENT) specialists, particularly within ACCHS and other Indigenous-specific primary health care services, based on need.

Australian governments have responded to chronic otitis media in Indigenous communities for two decades now and with increasing levels of investment (as discussed in Appendix 2). Yet the fact remains that chronic otitis media persists as a 'massive health problem' in too many Indigenous communities and appears to be an entrenched situation.

The AMA believes it is time to unite the current approaches of the Australian Government, the Northern Territory, New South Wales, Queensland, Western Australia and South Australia into a consistent national and systematic approach.

Our Recommendation 1 builds on the House of Representatives Standing Committee on Health, Aged Care and Sport's Inquiry into the Hearing Health and Wellbeing of Australia's report *Still waiting to be heard* recommendation that: *...the Department of Health, in collaboration with Australian Hearing, the Department of the Prime Minister and Cabinet, states and territories, Aboriginal and Torres Strait Islander health organisations, and local communities, develop a national strategy to improve hearing health in Aboriginal and Torres Strait Islander communities...*¹⁰

Further, the AMA supports the Royal Australasian College of Surgeons, the Australian Society of Otolaryngology Head and Neck Surgery,¹¹ and the *Ear Health for Life* campaign's¹² call to the above Inquiry for the embedding of hearing health in the COAG *Closing the Gap Strategy* targets - recognising its importance in early childhood development, education, and employment. The AMA also supports the March 2017 COAG Health Council *Communique* which recorded that: *...a national approach to reducing the burden of middle ear disease and associated hearing loss on Aboriginal and Torres Strait Islander people... is an important step towards achieving Closing the Gap targets.*¹³

The AMA believes it is critical to begin the development of such a national strategy with a clear sense of the adequacy or otherwise of existing services and programs and, particularly, what needs to be changed or reinforced. This would entail the AMA's recommended National Indigenous Hearing Health Taskforce undertaking a critical analysis of current approaches and identifying the range of reasons why the current crisis persists, as well as best practice and learnings of potentially wider application.

It is also vital that such a strategy is built on a reliable national chronic otitis media surveillance system that enables a regularly updated national picture of the crisis. This too could assist with assessment of the appropriate quantum of resources required, and the targeting of those resources to communities in which chronic otitis media is prevalent, in addition to 'universal' measures among the Indigenous population.

While acknowledging existing Australian governments' responses to chronic otitis media and the investment attached to these (as discussed in Appendix 2), the AMA believes the persistence and magnitude of the chronic otitis media crisis are more evidence of fundamental underlying issues that will continue to challenge efforts to close the Indigenous health gap until they are effectively addressed.

The first is the ongoing lack of primary health care relative to need in the Indigenous population. The AMA believes an important part of the systematic national approach being proposed here will be the expansion of primary health care services' capacity to respond to chronic otitis media, based on the implementation of the 2010 (or revised) *Recommendations for Clinical Care Guidelines on the Management of Otitis Media in Aboriginal and Torres Strait Islander Populations*¹⁴ (2010 Guidelines), and an audit of services' capacity against the required capabilities, with a funded implementation plan to systematically fill gaps. This will include expanding the accessibility of ENT specialists to these services.

The AMA believes that ACCHS should be the preferred model for investment in primary health care services for Indigenous communities, including through the planning and commissioning activities of the Primary Health Networks (PHNs). Aboriginal Community Controlled Health Services are associated with better health outcomes for Indigenous people; better access to services; and in the prevention, detection, and treatment of chronic disease.¹⁵ These findings provide strong support for properly resourced ACCHS as foundation services for addressing the chronic otitis media crisis, and other health problems, in Indigenous communities.

The second structural problem is the social determinants of Indigenous poor health - in particular, the overcrowded households and unhygienic conditions in too many communities that not only allow chronic otitis media to thrive, but are associated with what are considered almost exclusively diseases of Indigenous Australia. This includes rheumatic heart disease, the subject of the AMA's 2016 Report Card, and trachoma, among others.¹⁶ The Taskforce developing the national strategy must consider the limited impact of health services' responses when infants and children 'cured' of chronic otitis media are routinely being returned to the overcrowded and unhygienic conditions in which the disease can recur, or episodic forms of the disease progress to chronic forms.

The AMA believes chronic otitis media will persist in Indigenous communities until these underlying causes are addressed. Both are discussed further in Part 2 of this Report Card.

Recommendation 2:

That the national approach proposed in Recommendation 1 include addressing the wider impacts of otitis media-related developmental impacts and hearing loss, including on a range of areas of Indigenous disadvantage such as through the funding of research as required. This includes:

- A national approach to supporting Indigenous students with hearing loss that aims to remove disadvantage that they may face in educational settings,
- A national approach to developing hearing loss-responsive communication strategies in all government and non-government agencies providing services to Indigenous people including - but not limited to - health, mental health, justice, and employment services, and
- Exploring the support role of the National Disability Insurance Scheme (NDIS) to Indigenous people with hearing loss.

Recommendation 2 of this Report Card reflects the AMA's belief that addressing the social impacts of chronic otitis media must be included in any national systematic response. In fact, the AMA believes that the high rates of chronic otitis media-related hearing loss, and associated developmental impacts, are a 'wedge' preventing the closing of the wider Indigenous health gap,¹⁷ and a 'missing piece of the puzzle' for Indigenous disadvantage.¹⁸ Indeed, the AMA believes that there is enough evidence now for stakeholders and policy makers to start addressing the contributions of the 'sleeping giant' of otitis media-related developmental impacts and hearing loss to many areas of Indigenous disadvantage.

Most well-documented are the impacts of hearing loss on the education outcomes of Indigenous children, and the unacceptably high rates of Indigenous imprisonment (that are the subject matter of Recommendation 3). But there are many other potential impacts - including some yet to be fully explored in an Australian Indigenous context by researchers.

In particular, and acknowledging the high rates of chronic otitis media-related hearing loss and the often 'hidden' impacts of auditory processing disorders among the Indigenous population, communication strategies, particularly in services, should be considered as important as cultural safety and cultural competence to ensuring Indigenous people can access and benefit equally from those services.

Recommendation 3:

That attention of governments be re-directed to the recommendations of the AMA's 2015 Indigenous Health Report Card, which called for an integrated approach to reducing Indigenous imprisonment rates by addressing underlying causal health issues (including otitis media and related hearing loss and developmental impacts), with the expectation of appropriate action. The health issues to be addressed include mental health problems, cognitive disabilities, alcohol and drug problems, hearing loss, and developmental impacts associated with otitis media.

Recommendation 3 of this Report Card rounds off nearly a decade of AMA advocacy in relation to reducing Indigenous imprisonment and extends the AMA's 2015 Report Card's analysis of Indigenous imprisonment as a health issue.

As discussed in Part 3, the association of chronic otitis media-related hearing loss and the high rates of Indigenous imprisonment has been noted for over 25 years now - but with little action evident. Most notably, in October 2016, a 2011 study on the hearing health of prisoners in the Northern Territory was provided as evidence to the ongoing Royal Commission on the Protection and Detention of Children in the Northern Territory (Northern Territory Royal Commission). In this, 134 Indigenous inmates (13 per cent of the Northern Territory Indigenous prisoner population) were assessed for hearing loss.¹⁹ Of the sample, about 94 per cent were assessed as having some level of hearing loss: 56.7 per cent had mild hearing loss; 28.3 per cent had moderate hearing loss; and 9.7 per cent had severe hearing loss.²⁰

The research suggested that there are high rates of undetected hearing loss and lack of awareness of hearing loss, even among those affected. Further, of the sample, 72 per cent had not notified prison medical services of their hearing loss - in many cases because they are not aware of it. In fact, the researchers noted that with early onset hearing loss caused by middle ear disease, it is common that people are not aware that they hear differently to others.²¹

One of the authors of the study subsequently suggested that inmates with hearing loss may complete longer sentences for the same offences than those without hearing loss. Many Indigenous inmates elect to complete their whole sentence rather than apply for parole. It is thought that the communication challenges in applying for parole and understanding parole conditions affects this decision for many inmates with hearing loss.²²

The 2011 Northern Territory study was prompted by an earlier small study among 10 juvenile Indigenous inmates of the now notorious Don Dale Detention Centre in the Northern Territory that is a focus of the abovementioned Northern Territory Royal Commission. The study found active ear infections and hearing loss in six of the 10 boys assessed.²³ The two studies captured much media attention with one commentator asking: *Is hearing loss the biggest Aboriginal justice issue in the Top End?*²⁴ The AMA believes that this association can no longer be ignored.

PART 2

CHRONIC OTITIS MEDIA'S LIFE-LONG DEVELOPMENTAL AND HEARING IMPACTS

It has been estimated that an average Indigenous child will be coping with middle ear infections and associated hearing loss for at least 32 months from age two to 20 years, compared to three months for a non-Indigenous child over the same developmental period.²⁵ The 2017 House of Representatives Inquiry heard from the Menzies School of Health Research about a 2013 population health survey undertaken across multiple Northern Territory Indigenous communities. Overall, only seven per cent of children assessed had 'normal' ears at the time of the survey - with the proportion of children with 'normal' ears remaining at under 10 per cent since 2001.²⁶

Among Australia's Indigenous infants and children, chronic otitis media can be likened to the proverbial 'tip of the iceberg', with the potential for two types of disability long after the disease itself has cleared up.

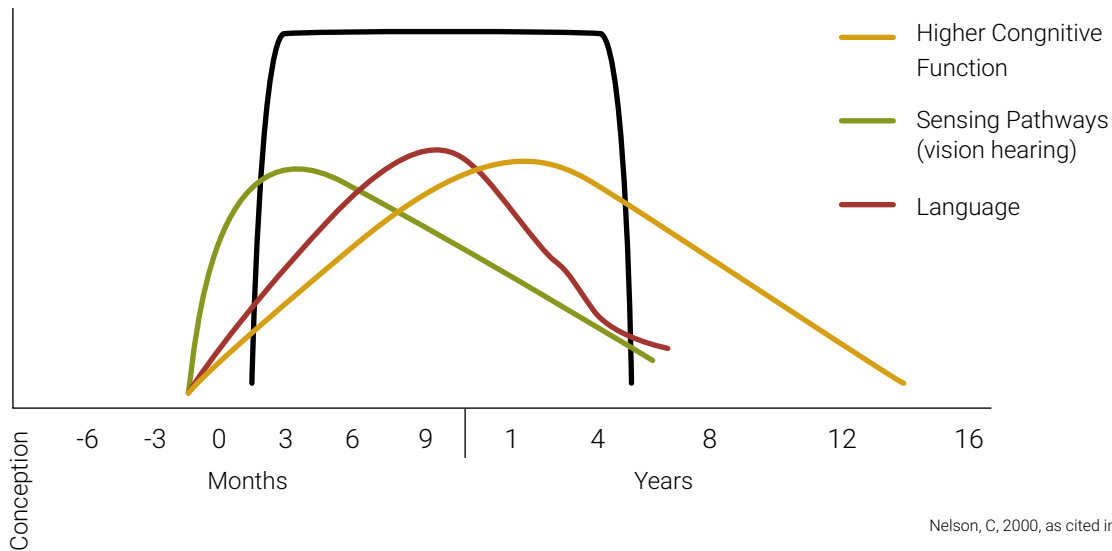
Life-long damage to the brain's capacity to process sound waves into understandable sounds and related impacts

It is of significant concern that researchers have identified the peak prevalence for otitis media in some Indigenous communities is at age five months to nine months; and that up to one-third of six-month-old infants had significant hearing loss.²⁷ The effects of long periods of mild or moderate hearing loss at critical developmental stages can be profound. During the first 12 or so months of life, a person's brain starts to learn to make sense of the sounds it is hearing. This is called 'auditory processing'. If hearing is lost during this critical period, and even if normal hearing returns later, life-long disabling auditory processing disorders can remain.

Auditory processing disorders are hard to detect. A person affected can otherwise be assessed as having 'normal hearing' as it is not the hearing itself (ear functioning and transferring sound waves to the brain) that is affected - rather the brain's ability to 'process' the sound waves.²⁸ Further research is needed to assess the scale of auditory processing disorders in Indigenous communities. However, a study conducted in 2000 among Indigenous secondary students reported 38 per cent had auditory processing problems, compared to 10 per cent in the general population.²⁹ Some researchers believe that this study is likely to have underreported the prevalence of auditory processing disorders in the wider Indigenous population.³⁰

Together, auditory processing disorders and hearing loss can have compounding impacts on Indigenous infants and children that affect cognitive and language development. In its submission to the 2017 House of Representatives Inquiry, the Queensland Deadly Ears program used what is reproduced here as Diagram 1 to illustrate the overlay of the peak prevalence of hearing loss associated with otitis media (the black line) across key developmental stages in young children, including language development and higher cognitive functioning.

Diagram 1: The Peak Prevalence of Hearing Loss Associated with Otitis Media on Key Developmental Stages in Young Children³¹



Disabling permanent hearing loss

Often the first sign that a child has CSOM is ‘after the event’, with a scarred or dry perforated eardrum remaining. This can result in permanent hearing loss with hearing aids and/or surgical interventions recommended. Hospitalisation data from July 2013 to June 2015 shows Indigenous children aged zero-14 years received surgical reconstructions for a perforated eardrum at four times the rate of non-Indigenous children;³² and one in 10 children fitted with a hearing aid or cochlear implant in 2010 were Indigenous³³ - although this is probably a lower rate than required.

Many Indigenous children, however, will be left with permanent mild to moderate hearing loss that is disabling even if it does not require hearing aids or surgery. ‘Mild’ and ‘moderate’ hearing loss are terms used to grade hearing loss in both adults and children. But it should not be assumed, as can happen, that there are few concerns about the impact of a mild hearing loss. Mild hearing loss (of around 30 decibels) can be approximated if a person tries to block out sound by putting their finger over their ear canal. For an infant or child, the WHO defines mild hearing loss as ‘disabling hearing loss’. In contrast, for an adult, the WHO assesses ‘disabling hearing loss’ at 40 decibels or more.³⁴

Chronic otitis media-related hearing loss can also critically impact on Indigenous children’s ability to learn. The 2004-05 Western Australian Aboriginal Child Health Survey (WAACHS) provided evidence for an association between ear infections (otitis media is not named, but clearly implicated) and increasing rates of learning difficulties in Indigenous children, as set out in Table 1 over the page.

Table 1: The Association of Ear Infections with Learning Difficulties Among Indigenous Children³⁵

Prevalence of ear infections	Prevalence of learning difficulties
No ear infections	7.6 per cent
A case of isolated discharge from the ear	9.8 per cent
Recurrent ear infections but no discharge	10 per cent
Recurrent and discharging ear infections	16.2 per cent

Because of the life-long impacts of chronic otitis media-related developmental impacts and hearing loss, effective strategies that prevent chronic otitis media in those aged under 12 must be considered a priority in any response, as reflected in Recommendation 1 of this Report Card.

However, the life-long nature of these impacts also needs to be addressed. The 2017 House of Representatives Inquiry report included estimates that chronic otitis media had left up to 40 per cent of the urban Indigenous population and up to 70 per cent of the remote Indigenous population with degrees of permanent hearing loss.³⁶

Alison Wunungmurra - the lived experience of hearing loss

I was affected by hearing loss while I was growing up. It was really hard. Now I really want you to imagine, I want you to put yourself in that classroom. You're the little kid that can't hear properly what the teacher is saying. Imagine the child in the classroom without hearing. Without good hearing, the child is ignored. Without good hearing, the child is scared, frustrated, and angry. And without good hearing, every day would be full of noise with no chance to listen. The picture that I just painted for you is really a scary world and this is happening to our children all around the country.

Now let's imagine the world with good hearing. In a world with good hearing, people would be able to better themselves. In a world with good hearing, there would be nobody left embarrassed and shamed in the classroom.

Communities would be full of pride and respect. In a world with good hearing, there would be only a few black people in jail. In a world with good hearing, there would be understanding.

As noted in the Introduction, the high rates of hearing loss in the Indigenous population have been described as ‘the missing piece of the puzzle for Indigenous disadvantage.’ While the association with poorer Indigenous education outcomes and higher imprisonment rates has already been addressed in this Report Card, the AMA believes that there is enough evidence now for stakeholders and policy makers to start addressing the contributions of the ‘sleeping giant’ of otitis media-related developmental impacts and hearing loss to many otherwise well-documented problems in the Indigenous population, as follows.

Emotional and behavioural difficulties in Indigenous children

In the WAACHS, children who had ever had ‘runny ears’ (this can be from CSOM or episodes of acute otitis media as discussed in Appendix 1) were at higher risk of significant emotional and behavioural difficulties than those who had not (31.6 per cent versus 21.8 per cent respectively). The association was consistent across age groups from four to 17 years.³⁷

As illustrated in Table 2 below, based on WAACHS data, speech problems appear to be a mediating factor between the occurrence of runny ears, hearing loss, and risk of significant emotional and behavioural difficulties in Indigenous children from four to 14 years of age. Overall, 23.4 per cent of children with normal hearing and 31.5 per cent of those with hearing loss were said to be at risk of social and emotional difficulties. The latter are not deemed statistically significant by the WACCHS researchers.³⁸ In contrast, statistically significant risk increases are associated when speech problems occur in addition to hearing loss.

Table 2: Ear Infections, Hearing and Speech Problems, and Risk of Significant Emotional and Behavioural Difficulties in Indigenous Children Four to 14 Years of Age³⁹

	EAR INFECTIONS				
	Percentage of the total WAACHS sample				
	No ear infections	Reported a case of isolated discharge from the ear	Reported recurrent ear infections but no discharge	Reported recurrent and discharging ear infections	At risk of significant emotional & behavioural difficulties
Abnormal hearing (discussed in text)	2.3 %	9 %	10.4 %	30 %	31.5 %
Speech unintelligible	7 %	8.2 %	8.5 %	18.4 %	42.8 %
Difficulty saying certain sounds	7.8 %	10.4 %	11.9 %	20.1 %	44.7 %
Stutter or Stammer	4 %	4.6 %	4.5 %	7.9 %	47.3 %

In other studies, overall, hearing-impaired children are reported to have lower levels of self-esteem because of impaired language and communication skills.⁴⁰ In particular, psychosocial impacts have been associated with a person with hearing loss having lower ability to express themselves and use language effectively,⁴¹ in addition to perceiving themselves as 'dumb' because of the challenges they face in following instructions.⁴² This can be particularly distressing when dealing with unfamiliar people and unfamiliar processes. Such situations can lead to increased anxiety and the use of avoidance behaviours to resolve discomfort. This can limit engagement with schooling, health, training, employment, and health services,⁴³ as discussed below.

Family functioning

Anecdotal evidence on the impact of hearing loss on Indigenous family functioning was submitted to the Northern Territory Royal Commission. Children with undetected hearing loss were more likely to be disciplined by their parents for misunderstandings where hearing loss was interpreted as rudeness or defiance.⁴⁴ Further, parents can question their parenting ability in these circumstances and become depressed, further affecting their parenting ability.⁴⁵

This echoed a 2006 study in which behaviours that stemmed from undetected hearing loss were interpreted as bad behaviours by parents (ignoring instructions, for example). This included avoidance (withdrawal of the child from parental and other social interaction), anger, bullying, and a greater propensity to violence on the part of hearing-impaired children (in part to vent frustrations associated with impaired communication). Parents also reported being 'stressed out'; unable to source informal child care for their child because of their child's reputation for bad behaviours; marriage and relationship breakdowns; and even increased alcohol and drug use to help cope.⁴⁶

Behavioural issues at school

Bullying and rejection by peers, and, conversely, bullying and violence perpetrated by children with hearing loss has been observed by researchers. Social isolation is a major challenge faced by children with hearing loss. First, because of not hearing well. Second, by being 'marked out as different' by the wearing of hearing aids (and that can result in some children refusing to wear them, regardless of the benefit to their hearing).⁴⁷

Researchers have also noted that Indigenous children with hearing loss are often reported to 'muck around' in class, and become rebellious and truant.⁴⁸ However, the associations between hearing loss and behavioural issues at school are more complex than a child's capacity to hear and follow instructions. 'Disruptive behaviours' were often attempts to avoid social exclusion. For example, in the often-noisy classroom, social engagement though 'physical' means, such as pushing and poking others, or taking things that belonged to others, might be attempted. Further, children with hearing loss often attempted to talk when the class was expected to be quiet: silence providing an opportunity to talk to others at a time they could best hear the responses of other children.⁴⁹

Other behavioural impacts can include those arising from hearing loss being mistaken for conditions like attention deficit hyperactivity disorder, with the potential result of inappropriate use of medications.⁵⁰

Delinquency and aggression in juveniles

A 2004 Canadian 14-year longitudinal study examined the behavioural outcomes of speech and language-impaired children with assessment at age five, 12, and 19 years. It found that language-impaired boys had higher levels of parent-rated 'delinquency symptoms' by age 19 years than boys without language impairment. The assessment tools used asked parents to report on, among other measures, their child's 'lying or cheating', 'stealing at home', whether their child 'physically attacks people' and 'gets into many fights'. The language-impaired boys themselves self-reported higher rates of arrests and convictions within the criminal justice system than controls.⁵¹

While additional research is needed to assess the applicability of these findings in an Australian Indigenous context, and to connect this line of research to otitis media and associated hearing loss-caused speech and language impairment, the study suggests a fruitful line of inquiry with potentially significant implications for the unacceptably high rates of Indigenous juvenile incarceration in Australia.

Vulnerability, including in institutional settings

Like in school settings, Indigenous children with hearing loss in institutional settings, such as out of home care, can have significant problems - particularly with communicating with unfamiliar people. This can lead to avoidance behaviours and frustrations that lead to delinquent and aggressive behaviours. At the Northern Territory Royal Commission, evidence has been submitted that such children often become silent and are sometimes assumed to be traumatised because of exposure to abuse,⁵² or with a cognitive disability,⁵³ rather than being correctly diagnosed as having hearing loss.

Children with hearing problems in institutional settings are also reported to be more likely to be 'groomed' by others to take the blame for their bad behaviours.⁵⁴ This is echoed by research from the United States that has identified a wide range of vulnerabilities experienced by young people with hearing loss, particularly in institutional settings. These include a significantly higher risk of sexual abuse, being a victim of crime, and other traumatising events.⁵⁵ The *Little Children are Scared* report noted that the inquiry had received evidence that hearing loss can play a significant role in the sexual abuse of Indigenous children. This is because they were 'generally less confident, less assertive and anxious, and find it more difficult to protect themselves and express to others that they have been abused.'⁵⁶ To protect them from such risks, it is critical that communication strategies for Indigenous children and adults in institutional settings are developed, as set out in Recommendation 2 of this Report Card.

Mental health impacts

Hearing loss in general can restrict a person's capacity to live life to the full, and this can have a depressing effect. In 2008, the annual cost to Australian Indigenous people of otitis media was estimated at between 887 and 2,178 disability-adjusted life years (DALYs).⁵⁷

A 2017 review of the limited literature available identified social and behavioural problems as well as higher levels of psychological distress in Australian Indigenous people with hearing loss.⁵⁸ While few other Indigenous-specific studies have occurred, Australian researchers have found that, as children with hearing loss grow to adulthood, they are more likely to experience mental and emotional issues; anger, depression, anxiety, loneliness, and frustration, than those without hearing problems.⁵⁹ Of note:

- A 2014 longitudinal study of two cohorts of Australian children aged zero-one years and four-five years reported a range of abnormal or borderline psychosocial issues at six-seven years and 10-11 years, respectively,⁶⁰ and
- A 2007 general population survey conducted in Australia by BeyondBlue found that six in 10 people with hearing loss had displayed some of the symptoms associated with depression: one in two had displayed increased irritability and frustration; one in five had trouble sleeping or experienced restlessness; nearly 20 per cent showed a loss of interest or pleasure in most activities; one in seven was described as sad, down and miserable most of the time; and one in seven had withdrawn from close family and friends.⁶¹

For Indigenous and non-Indigenous people with hearing loss, associated mental health impacts can also be exacerbated by higher levels of unemployment,⁶² as discussed in Text Box 2 below.

Alcohol and drug use

United States researchers have reported significantly higher rates of alcohol and substance abuse among those with hearing loss - with one in seven having substance dependency compared to one in 10 hearing people.⁶³

While research is needed to establish whether Australian Indigenous people with hearing loss are at greater risk of alcohol or drug use because of hearing loss, one researcher has noted that Indigenous people with hearing loss may use alcohol and drugs to help 'manage' the anxiety associated with hearing loss in social situations. The same researcher reported anecdotally that around 60 per cent of Indigenous participants in an alcohol rehabilitation program he worked in were found to have a hearing loss. Further, those with hearing loss participated less than others in the discussion-based group work of the program, and were perceived to get less out of the program.⁶⁴

Other problems

Family violence in Indigenous communities has been connected to communication misunderstandings related to hearing loss.⁶⁵ Some Australian experts have also connected Indigenous hearing loss and related mental health issues to the high rates of suicide,⁶⁶ although there is a need for more research in this area.⁶⁷

As discussed in Text Box 2, hearing loss has also been associated with higher rates of unemployment, lower income and poorer health. In relation to the latter, it is associated with lower health literacy (with impacts on disease self-management such as required for diabetes), and avoidance behaviours in relation to health services.⁶⁸

Text Box 2: Other contributions of hearing loss to Indigenous disadvantage and the need for communication strategies in employment and service contexts

• Employment impacts

Access Economics' 2006 *Listen Hear!* report on the economic impact of hearing loss in Australia noted the significantly higher unemployment rates of all people with hearing loss, and also the significantly lower incomes that all people with hearing loss reported.⁶⁹

In his 2010 *Listening, Learning and Work* study on improving outcomes in Indigenous training and employment, Howard noted that the employers, supervisors, and trainers he had interviewed were mostly unaware of the widespread incidence of hearing loss among Indigenous workers, or of its occupational consequences. Further, Indigenous workers were often unaware that they had hearing problems. He noted that Indigenous employees with hearing loss had a critical need for alternate communication strategies that did not solely rely on auditory and verbal signals. When employers and supervisors enabled such strategies, it resulted in greater productivity, improved wellbeing, and higher retention rates among Indigenous staff.⁷⁰

Some Indigenous-specific research has indicated that workers with hearing loss experience more communication, performance, and interpersonal problems in the workplace. Workers with hearing loss described experiencing higher levels of anxiety than other workers, and often needed to rely on supportive peers to understand instructions given to them. They experienced difficulties in job interviews and training. Further, the use of avoidance behaviours as a coping strategy resulted in higher levels of absenteeism, and limited participation in training - such as literacy support - to improve work performance.⁷¹

• Health impacts and implications for health and mental health services

As has been discussed in many previous AMA Indigenous Health Report Cards, Indigenous Australians have a significantly higher burden of chronic disease when compared with other Australians, with particularly high rates of diabetes - a disease that requires significant self-management - reported.

To date, however, there has been little research into how hearing loss could be contributing to poor chronic disease outcomes in the Australian Indigenous population and the impacts of hearing loss on acquiring health literacy and communication difficulties during health consultations, compliance and disease self-management, and even specialist referrals.⁷²

While health services are aware of the problems of ear disease among Indigenous children, they are generally not aware of the resulting widespread hearing loss among adults, and how to minimise its impact on effective communication with adult Indigenous clients to improve their health outcomes.

Such concerns apply equally in relation to mental health services where it has been observed that communication difficulties due to hearing loss can be 'explained away' as being the result of cultural differences.⁷³

As in relation to employers, researchers have stressed the importance of communication strategies, including amplification devices in health contexts, to help address these issues in a service context. Recommendation 1 of this Report Card addresses this issue.

PART 3

DISCUSSION ON THE RECOMMENDATIONS

The Australian Government has played a role in addressing general population hearing loss since World War II. It first initiated responses to Indigenous hearing loss in 1995 - as set out in Appendix 2 of this Report Card. The States and Territories have also developed strategic responses: the Northern Territory, New South Wales, and Queensland have actively worked to address otitis media in Indigenous communities for some years now and, more recently, South Australia and Western Australia have initiated their own responses. Yet the fact remains that chronic otitis media persists as a 'massive health problem' in too many Indigenous communities and appears to be an entrenched situation.

As noted in this Report Card's Introduction, the AMA believes it is time to unite the current approaches of Australian governments into a consistent national and systematic approach. Such a national strategy should be reflected in the COAG *Closing the Gap Strategy* targets.

Recommendations

Recommendation 1:

That a coordinated national strategic response to chronic otitis media be developed by a National Indigenous Hearing Health Taskforce under Indigenous leadership for the Council of Australian Governments (COAG). This should build on and incorporate existing national and State and Territory-level responses and include:

- A critical analysis of current approaches, and to identify the range of reasons that current chronic otitis media crisis persists,
- The development of a COAG Closing the Gap target about new cases of chronic otitis media and hearing loss in Indigenous infants and children under 12 years of age,
- A national otitis media surveillance program to monitor prevalence and support a targeted and cost-effective national response,
- A significantly increased focus on prevention - both primordial prevention with a focus on the social determinants of the disease, and primary prevention including family and community health literacy about otitis media,
- A central, adequately funded and supported role for primary health care and Aboriginal Community Controlled Health Services (ACCHS) in a systematic approach to the prevention, detection, treatment, and management of otitis media, and
- Access to ear, nose and throat (ENT) specialists, particularly within ACCHS and other Indigenous-specific primary health care services, based on need.

The National Indigenous Hearing Health Taskforce

Recommendation 1 includes the establishment of a 'National Indigenous Hearing Health Taskforce' that will include (as per the *Still waiting to be heard* report): Australian Hearing, the Department of the Prime Minister and Cabinet, representatives of the States and Territories, Indigenous health organisations (the AMA recommends the National Aboriginal Community Controlled Health Organisation (NACCHO) play a key role), and representatives of Indigenous communities.⁷⁴ To this, the AMA adds key medical research bodies and institutions with experience of working in Indigenous communities with chronic otitis media.

As with all decision-making about the Indigenous population, and reflecting the human rights of Indigenous peoples, this Taskforce should be under Indigenous leadership. The Taskforce's mandate might include to:

- Identify and define the scale of the problem, and regions and communities that should be prioritised,
- Establish and coordinate the strategy development process,
- Identify the evidence base for what works: commission literature reviews, identify 'knowledge gaps' and commission required research,
- Consult with communities, medical experts, and other stakeholders,
- Ensure that the role of social determinants is addressed,
- Ensure the overall approach includes addressing cultural safety and cultural appropriateness overall,
- Work with Australian governments to negotiate a national, coordinated response,
- Prepare a draft strategy and test it with stakeholders,
- Develop a distribution strategy,
- Guide implementation processes, and
- Map out evaluation and review times.

The AMA believes it is critical to begin the development of a national strategy with a clear sense of the adequacy or otherwise of existing responses to understand why the current crisis persists, best practice and learnings of potentially wider application and, particularly, what needs to be changed or added to. This would be a primary function of the National Indigenous Hearing Health Taskforce.

Surveillance and consistent data to support targeted responses

To date, hearing loss in the Indigenous population is yet to be accurately quantified due to a lack of quality data.⁷⁵ Indeed, existing data sources are likely to vastly underestimate the problem. The Australian Bureau of Statistics' (ABS) 2014-15 *Indigenous Social Survey* shows, for example, that 26 per cent of Indigenous people aged 55 years and over have hearing loss.⁷⁶ But this survey relies on self-reporting when many participants may be unaware that they have hearing loss - in part because it has been normalised in their communities.

Further, the Queensland Deadly Ears Program submission to the 2017 House of Representatives Inquiry noted that 'data collection [around otitis media] is inconsistent, patchy, and unreliable, and does not allow robust comparisons across jurisdictions. This is the case for both middle ear disease itself and the hearing loss it can create'.⁷⁷

The first step in relation to agreeing to a national approach is agreeing on definitions, assessment and management methods, and data gathering methodologies on otitis media and hearing loss.

The next step would be to put in place a national surveillance system. The 2010 Guidelines define surveillance as 'the systematic and ongoing collection, analysis, and interpretation of measures of middle ear disease and hearing loss to identify and correct deviations from normal'.⁷⁸ They call for otitis media, hearing loss, and speech and language development surveillance using a variety of methods, including child health checks to maximise opportunities for detection and appropriate management.⁷⁹ Such a surveillance system can be built into Health Information Systems at the primary health care level by encouraging a consistent approach to entering clinical data. The 2013 Western Australian *Otitis Media Model of Care* suggests including chronic otitis media as a notifiable disease as one option for surveillance.⁸⁰

An important benefit of surveillance is that it could assist with assessment of the appropriate quantum of resources required, and the targeting of those resources to communities in which chronic otitis media is prevalent, in addition to 'universal' measures among the Indigenous population.

A focus on primordial and primary prevention

In broad terms, the AMA believes that the chronic otitis media crisis is but another facet of deeper 'structural' problems that underpin the Indigenous health and life expectancy gap. One of these is the social determinants of Indigenous poor health - in particular, the overcrowded households and unhygienic conditions in too many communities that not only allow chronic otitis media to thrive, but are associated with what are considered almost exclusively diseases of Indigenous Australia. This includes rheumatic heart disease, the subject of the AMA's 2016 Report Card, trachoma,⁸¹ tuberculosis,⁸² scabies,⁸³ paediatric chronic suppurative lung disease,⁸⁴ and acute post-streptococcal glomerulonephritis.⁸⁵

Housing must be addressed as a part of the national strategy recommended here. See Text Box 3 for further discussion.

Text Box 3: Indigenous Housing as an Underlying Health Issue

At the time of the 2011 Census, Indigenous overcrowding was more than three times the rate of overcrowding in other households. That is, 24,700 Indigenous households⁸⁶ with 115,600 members,⁸⁷ were deemed to be overcrowded.⁸⁸ Overall, 12.9 per cent of Indigenous households required one or more extra bedrooms. In remote areas, this rose to 20 per cent and, in very remote areas, 39 per cent of Indigenous households.⁸⁹

In 2008, COAG agreed to the \$5.4 billion National Partnership Agreement for Remote Indigenous Housing, which was replaced by the Remote Housing Strategy in 2016, and a set of objectives which aimed to reduce significant overcrowding, poor housing conditions and severe housing shortages.

An independent review of the Strategy reported in 2017. It found that by 2018, the Strategy will have delivered around 4,000 new houses and 7,500 refurbishments. Further, significant local Indigenous employment has been generated by the Strategy. However, the review found that, accounting for population growth, an additional 5,500 homes are required by 2028 to reduce levels of overcrowding in remote areas to acceptable levels. Half of the additional need is in the Northern Territory.⁹⁰

The review found that the Strategy implementation was complicated by multiple objectives, poor governance and constantly changing policy settings. Both Commonwealth and jurisdiction officials consulted by the Panel noted the distractions caused by constant renegotiations to the agreement.⁹¹ Significant concerns were also expressed about the maintenance of the new and refurbished homes under the strategy, among other concerns about the funding and sustainability of the Strategy beyond 2018.⁹² The AMA believes the 12 recommendations of the review must be urgently implemented.

The New South Wales Otitis Media Screening Program (as discussed in Case Study 1) highlights the importance of addressing housing and primary prevention, including:

- Continuing efforts to reduce smoking rates among Indigenous communities and raise awareness about the association of passive smoking with otitis media with effusion (OME) in children (see Appendix 1 for the association between passive smoking and otitis media),
- Continuing efforts to improve ear and hearing health literacy. This includes detecting and preventing otitis media by alerting mothers: to symptoms of otitis media; that many infants and children's otitis media will not show symptoms (i.e. no pain); the potential impacts of untreated otitis media and the need to complete antibiotic prescriptions and review; the need for regular ear checks at the health service, even if there are no obvious signs, but particularly if there is pain or ear discharge; promoting behaviours directly associated with lower otitis media rates, including breast feeding for six months, bottle feeding infants in an upright position, and stopping use of pacifiers after six months; and general education around hearing and developmental milestones, hygiene, and the relationship of hygiene and the prevention of disease,⁹³

- Promoting culturally appropriate family and community otitis media and hearing health education including through maternal and child health programs. 'Runny ears', hearing loss and delayed speech and language development must be 'de-normalised' as an experience in some Indigenous communities, including by culturally appropriate education campaigns that challenge such 'norms', and
- Promoting vaccination programs for the bacteria and viruses associated with otitis media. Vaccinations - particularly the pneumococcal conjugate vaccination administered during infancy and the influenza vaccination (particularly just before the flu season) - are recommended by the 2010 Guidelines.⁹⁴ It is also important to support further research into vaccines; such is being undertaken by the Menzies School of Health Research at time of writing.

Case Study 1: Learnings from the New South Wales Otitis Media Screening Program

The New South Wales Otitis Media Screening Program, undertaken from 2004-2008, involved 60,000 Indigenous children up to six years of age. It aimed to identify those with otitis media. Of these, about 30 per cent required further referral. This was mostly to primary health services for follow up, but 11-12 per cent (or three to four per cent of the total sample) had problems serious enough for referral to ENT specialists.⁹⁵

The program was, however, evaluated as ineffective largely because it did not address the underlying social and environmental factors contributing to otitis media. Instead, a comprehensive public health approach was recommended with far more emphasis on prevention and surveillance.⁹⁶ Following this, in 2011, New South Wales Health launched the New South Wales Aboriginal Ear Health Program. This encourages local health districts to move away from screening-only approaches and to focus instead on addressing environmental health risk factors; reducing maternal antenatal smoking; increasing maternal postnatal breastfeeding; improving safe and healthy housing conditions; linking with existing child health surveillance programs, and improving awareness and education among Indigenous communities and human services professionals.⁹⁷

A central and supported role for primary health care

A further underlying problem that underpins the Indigenous health and life expectancy gap, and must be addressed in the national strategy proposed here, is the ongoing lack of primary health care relative to need in the Indigenous population as discussed in Text Box 4 below.

Primary health care has a critical place in any national response to otitis media, including in relation to: screening and surveillance for otitis media and hearing loss during Indigenous child health checks occurring at intervals from the neonatal to pre-school period; treatment (i.e. with antibiotics) and follow up assessment; and referral to speech pathologists and audiology support services if required.⁹⁸ In fact, most otitis media cases are diagnosed and managed in primary health care settings. It is also in primary health care settings that the greatest opportunities for health gains and greatest risk of misdiagnosis or mismanagement are found.

Primary health care settings should be able to detect and manage chronic otitis media appropriately and effectively by implementing the 2010 Guidelines. As discussed in the Introduction, a shift in approach is needed that is embodied in the Guidelines, and that can be summarised as: treating chronic otitis media as a chronic condition causing long term disability, and not otherwise treating it as an episodic or acute condition as it occurs in the non-Indigenous population. Clinical guidelines are necessary but on their own are not sufficient in ensuring better management of chronic ear disease: primary health care services should be supported to develop a systematic approach to implementing the guidelines.

A systematic approach to otitis media within primary health care settings includes surveillance, as discussed above. While ear checks are an important part of Indigenous health checks, Indigenous infants' and children's ears should be checked as frequently as possible because the disease is mostly asymptomatic yet can either persist long term or progress rapidly to eardrum perforation. Some health services have a policy that all Indigenous infants and children brought to their clinic for any reason have an ear check-up with follow-up as required.

A systematic approach also includes thinking of chronic otitis media treatment over the long term, ensuring appropriate follow-up and referrals - with appropriate reminders in health information systems. Management of CSOM, in particular, requires intensive follow-up to support the child and their family or carers to clean infected ears and ensure antibiotic drops are used until discharge resolves or the eardrum heals. This requires a primary health care service to recognise the problem sufficiently to put the time and effort into the activity, including by employing dedicated Aboriginal Health Workers who can visit and support affected families over the months that treatment may take.

It also means using primary health care settings to help address the home and community situations of those affected, including by GP and Aboriginal Health Worker education of families affected by otitis media and hearing loss. This is also a good opportunity to talk to families about the possible life-long consequences, and the need to develop family communication strategies for those affected. Such awareness can also help to motivate family and community to address otitis media, and help prevent some of the negative social outcomes of hearing loss - for example, by preventing children being unfairly punished because it is thought they have been defiant.

Finally, a systematic primary health care setting approach to chronic otitis media could lead to more efficiently targeted ENT specialist support (as discussed further below). This means that ENT specialists should only end up seeing, at an appropriate time, infants and children who need their intervention, and not infants and children who should be more appropriately managed within primary health care.

Text Box 4: Lack of Primary Health Care as Underlying Health Issue

Despite significant recorded increases in GP Medicare items claimed by Indigenous peoples over the past decade,⁹⁹ evidence suggests that Indigenous people are still not accessing primary health care in relation to their significantly greater health needs when compared to the general population:

- An indicator of this is the significantly higher rates of preventable hospital admissions recorded among the Indigenous population. These are admissions for diseases that, for the most part, could have been prevented through primary health care. In the two-year period from July 2013 to June 2015, rates for potentially preventable hospital admissions were three times as high for Indigenous peoples as rates for non-Indigenous Australians, with rates four times higher in remote areas,¹⁰⁰ and
- Further, Indigenous people died from avoidable causes at 3.3 times the rate of non-Indigenous Australians over the same period. This included deaths from the following conditions that might have been prevented, detected early and/or treated in primary health care settings: ischaemic heart disease (22 per cent of avoidable deaths); diabetes (12 per cent); and chronic obstructive pulmonary disease (7 per cent).¹⁰¹

There has been an overall increase in the number of Commonwealth-funded Indigenous PHC organisations, from 108 in 1999-2000 to 203 in 2014-15. However, service gaps are evident.¹⁰² Further, the reach of these organisations could be significantly increased. The Indigenous clients of these organisations represented nearly half (47 per cent) of the total Indigenous population of Australia. Coverage of the Indigenous population varied by State and Territory.¹⁰³

Aboriginal Community Controlled Health Services as the Preferred Providers of Primary Health Care to Indigenous Communities

The AMA believes that ACCHS should be the preferred model for investment in primary health care services for Indigenous communities, including through the planning and commissioning activities of the PHN.

These are health services initiated, operated, and controlled by the communities they are established to serve, and who may already have many years of experience in working with children with otitis media and related hearing loss. Further, a systematic approach to otitis media management requires a team-based, multidisciplinary approach which correlates to the ACCHS model, and the use of Aboriginal Health Workers, who require minimal training to provide management support. As well, Aboriginal Health Workers have culturally based communication skills that allow greater ease of communication with patients and their families who experience hearing loss.

By working to improve the health of all community/household members simultaneously, ACCHS can also help stop the transmission, infection, and cycles of reinfection by bacteria and viruses associated with otitis media, which can lead to CSOM, as well as educate families on the impacts of hearing loss in culturally and communicatively appropriate ways.

Aboriginal Community Controlled Health Services are associated with better health outcomes for Indigenous people. A literature survey undertaken by Panaretto and colleagues found they performed significantly better than other services in relation to ensuring access to services and in the prevention, detection and treatment of chronic disease.¹⁰⁴ The Australian Government has also documented the success of ACCHS in improving maternal and child health.¹⁰⁵ These findings provide strong support for properly resourced ACCHS as foundation services for addressing the chronic otitis media crisis, and other health problems, in Indigenous communities.¹⁰⁶

In 2017, seven evidence-based indicators for continuous quality improvement (CQI) for otitis media in primary health care for Indigenous children were developed by an expert working group.¹⁰⁷ With appropriate resources, including specialised equipment and dedicated skilled and supported Indigenous ear health specialists, an ACCHS should be able to implement a culturally safe, culturally competent, and comprehensive primary health care model that can include a model of care to rapidly detect and treat otitis media.

However, this will require more than just CQI indicators and equipment. It will require an increased recognition from governments of the importance of ACCHS and a renewed commitment to increased funding (directly to ACCHS, not via mainstream organisations) to improve Indigenous people's access to appropriate comprehensive primary health care, and to enhance the systematic management of chronic otitis media in new and existing services.

Enhanced access to ear, nose, and throat specialists

As discussed, complementing the primary role of primary health care in any national response to chronic otitis media is enhanced access to ENT specialists, including through electronic means.

The importance of ensuring this is illustrated by the review of the Northern Territory Remote Aboriginal Investment: Ear and Hearing Health Program over 2012-16, which reported that because the majority of Indigenous children seen required repeated and long-term follow-up services, there was a significant backlog at 30 June 2016 of almost 3,000 Indigenous children and young people waiting for audiology services, and 1,841 for ENT teleotology services (whereby videos or pictures of eardrums are used by off-site ENT specialists to diagnose ear disease). In response, the Program had begun to prioritise children most at need, as well as enhancing clinical nurse specialists' services. It has also begun to work on hearing health promotion and education activities.¹⁰⁸ This part of Recommendation 1 is aligned with Recommendation 2 of the 2017 *Still waiting to be heard* report that: *... the Department of Health and Australian Hearing significantly increase the resources devoted to providing hearing health services in regional and remote Aboriginal and Torres Strait Islander communities. The mobile outreach services of the Deadly Ears Program should serve as a best practice example for national implementation. This program should focus on expanding access to hearing health services in regional and remote locations and reducing the waiting lists for Aboriginal and Torres Strait Islander children requiring hearing health treatment.*¹⁰⁹

The importance of access to ENT specialists is illustrated by Case Study 2 taken from the evaluation report of the Queensland Health Deadly Ears Program.

Case Study 2: Learnings from the Queensland Deadly Ears Program: Eidsvold

Eidsvold has a population of around 630 people - with a third of the population identifying as Aboriginal and Torres Strait Islander - and is approximately 180km south-west of Bundaberg in Queensland.

Since 2008, the middle ear disease presentations at specialist outreach ENT clinics have steadily decreased. Rates of children presenting with middle ear problems decreased from a high of 83.3 per cent when the clinic first started to 11.9 per cent in 2014. In the final three years of the clinic, only two of 217 children presented with CSOM. These changes were the result of six years of perseverance, partnerships, and planned activity initiated by local community members and supported by the Wide Bay Hospital and Health Service and Queensland's statewide Children's Health Deadly Ears Program to improve the delivery of ear and hearing health services for children.

Over the last six years, community members and service providers participated in a wide range of activities focused on improving ear health. This included running health education and awareness programs, training local healthcare workers to screen for middle ear disease, and hearing loss, training childcare workers and teachers to identify the signs and symptoms of middle ear disease, and conducting routine and opportunistic screens of children's ears every time a child presented to the local community health clinic or visited a GP. Incorporating ear and hearing screening into every type of child health check - even if a child had no symptoms and presented to the local health service or hospital with a sore toe - was critical to reducing the incidence of middle ear disease in Eidsvold.

Child ear and hearing health remains a local health priority in Eidsvold today, and continues to be proactively managed by families, the local health service, childcare organisations, and schools.

Recommendation 2

Further to Recommendation 1, efforts to address the role of chronic otitis media-related Indigenous disadvantage (as outlined in Part 2 of this Report Card) should be integrated with the national strategic response.

Recommendation 2: That the national approach proposed in Recommendation 1 include addressing the wider impacts of otitis media-related developmental impacts and hearing loss, including on a range of areas of Indigenous disadvantage and through the funding of research as required. This includes:

- A national approach to supporting Indigenous students with hearing loss that aims to remove disadvantage that they may face in educational settings,
- A national approach to developing hearing loss-responsive communication strategies in all government and non-government agencies providing services to Indigenous people including - but not limited to - health, mental health, justice, and employment services, and
- Exploring the support role of the National Disability Insurance Scheme (NDIS) to Indigenous people with hearing loss.

Supporting Indigenous students with hearing loss.

This part of our Recommendation aligns with Recommendation 21 of the 2010 *Hear Us* report of the Senate Community Affairs References Committee inquiry into Hearing Health in Australia. That was that the '[Department of Education] jointly establish a taskforce to work across portfolios and jurisdictions on a plan to systemically and sustainably address the educational needs of hearing-impaired Indigenous Australian children.'¹¹⁰ It also builds on Recommendation 3 of the 2017 House of Representatives Inquiry report.

For further discussions on the impacts of hearing loss on Indigenous education, which are significant but otherwise well documented, and strategies to address the impacts of hearing loss on Indigenous students (through sound amplification technologies and hearing aids, for example), the reader is referred to the Australian Indigenous HealthInfoNet's 2009 *Review of Educational Approaches to Hearing Loss Among Indigenous People* and the 2010 Senates Community Affairs References Committee inquiry into Hearing Health's *Hear Us* report.

Hearing loss communication strategies

Just as ramps are used to assist people in wheelchairs to access services, responsive agency communication strategies are required to overcome the less obvious barriers faced by people with hearing loss who are attempting to access health services, training, employment, etc, on an equal basis to other citizens. For Indigenous people with hearing loss, such communication strategies can be as important as cultural safety and cultural competence in services and among professionals.

Communication strategies can include, but are not limited to: using highly visual communication strategies; minimising background noise during conversations; using the language clients know best to communicate in; services having amplification devices to use as part of service delivery; and training workers to recognise

signs of hearing loss, develop necessary communication skills, and avoid responses that prompt shame, anxiety, and disengagement. The use of culturally based communication skills by Indigenous workers is also an important component of this.¹¹¹

It has been suggested that there is a need for the development of 'Best Practice Communication Guidelines' to complement the Best Practice Clinical Care Guidelines that have been developed with Commonwealth Department of Health support.

Need for further research into chronic otitis media related impacts and social problems

Further research in many areas to fully understand the social impacts of chronic otitis media is required. In 2017, the Menzies School of Health Research announced the first clinical trial of the impacts of vaccines on otitis media and developmental milestone trajectories through the first three years of life, commencing with Indigenous infants 28 days old. This and other research is necessary if the personal, social, and other costs of otitis media to Indigenous people, families, and communities are to be properly assessed and integrated into any overall national approach to addressing otitis media, hearing loss, and its impacts.

Another important research focus is how Indigenous peoples' access to services is influenced by hearing loss in key areas of Indigenous disadvantage (health, employment, post primary education, and so on) and how any adverse impacts can be minimised.¹¹² Further research is also needed into what some researchers refer to as a 'second wave' of noise-induced hearing loss in the Indigenous population. This is a result of the high proportion of Indigenous people with chronic otitis media-related hearing loss living in crowded houses, and a tendency to 'turn up the volume' on radios, televisions and music players to hear them over other competing noise sources.¹¹³

The potential role of the National Disability Insurance Scheme

The role of the NDIA in providing support to Australian Indigenous people with permanent hearing loss (and that is as assessed by the National Disability Insurance Agency as a 'severe disability') is an important part of the national approach recommended here.

The AMA welcomes the NDIA submission to the 2017 House of Representatives Inquiry in which it 'recognised [hearing loss] to be a significant factor in many aspects of Aboriginal community disadvantage including in social participation, performance at school, employment, and interaction with the criminal justice system', and committed to specifically consider hearing loss as part of the rollout of the NDIS in Indigenous communities.¹¹⁴

Recommendation 3

As noted, while the Northern Territory Royal Commission has shone a bright light on the association between hearing loss and the high rates of Indigenous imprisonment over the past year, the association has been reported for almost 25 years:

- A 1993 study first proposed that Indigenous peoples' disproportionate contact with the criminal justice system may be resulting from the compounding impacts of hearing loss,¹¹⁵

- The 2010 Senate Community Affairs References Committee inquiry into Hearing Health in Australia heard that up to 90 per cent of Indigenous prisoners had hearing loss.¹¹⁶ In fact, the contribution of hearing loss to Indigenous imprisonment rates was a significant focus of the inquiry's *Hear Us* report. This also noted hearing-impaired Indigenous people were more likely to be arrested and charged with crimes because they could not explain themselves to police or give adequate instructions to their solicitor, and were less likely to be viewed as credible witnesses in court,¹¹⁷ and
- The 2011 *Doing Time: Time for Doing* report of the House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs' Inquiry into Indigenous Youth in the Criminal Justice System noted that, during the Committee's visit to youth detention centres, 'health officials [there] indicated that Indigenous youth coming in to detention have high rates of hearing loss'.¹¹⁸ The Committee concluded that the 'inability of schools to identify and respond to hearing loss among Indigenous children significantly increases the likelihood of future incarceration for these children'.¹¹⁹ The report made recommendations that the Australian Government should fund the hearing assessment of all Indigenous children commencing pre-school, in addition to all Indigenous school children already at school between pre-school and second grade.¹²⁰ It also recommended a training program for police to support them better identifying and responding to individuals with hearing loss, particularly in Indigenous communities.¹²¹

Recommendation 3 of this Report Card builds on the above recommendations and also Recommendation 27 of the 2010 *Hear Us* Report that the Australian governments develop and implement a national plan to assess all prisoners for hearing loss upon prison entry¹²² (with, it should be added, further testing as required should the need for it be revealed by otherwise unexplained behaviours such as appearing not to follow instructions, and so on).

It is a natural extension to the AMA's advocacy for improved provision of primary health care services to Indigenous people in prison, including calls to support ACCHS to provide culturally safe models of primary health care in custodial settings. This would allow ACCHS to provide improved continuity of care with detection, treatment and ongoing management across the pre-custodial, custodial and post-custodial cycle. Further, the AMA supports the proposed amendment to Section 19(2) of the *Health Insurance Act 1973 (Commonwealth)* to allow access to Medicare in custodial settings.

Recommendation 3: That attention of governments be re-directed to the recommendations of the AMA's 2015 Indigenous Health Report Card, which called for an integrated approach to reducing Indigenous imprisonment rates by addressing underlying causal health issues (including otitis media and related hearing loss and developmental impacts), with the expectation of appropriate action.

In closing, the AMA also supports the call of the Queensland Health Deadly Ears Program to the recent House of Representatives Inquiry, that the cost impact of hearing loss - factors such as welfare uptake/dependence, unemployment, contact with the justice system and the impacts of incarceration, child protection issues, smoking, diabetes, heart disease and other preventable health conditions associated with lifestyle choices linked to lower education levels, and additional supports required from the education system - be factored into the funding of a national approach identifying the potential overall return on investment.¹²³

APPENDIX 1

OTITIS MEDIA IN THE INDIGENOUS POPULATION¹²⁴

Otitis media describes a continuum of middle ear disease. In its early stages, it is a relatively innocuous and common childhood condition with the primary symptom of fluid in the middle ear cavity. All forms of otitis media cause degrees of hearing loss that last for the duration of the disease. When it lasts for months and years as a chronic condition, it can affect a child's brain development. It can also lead to permanent hearing loss. As such, it can have life-long disabling impacts.

Acute Otitis Media and Chronic Suppurative Otitis Media

For most Australian children, otitis media strikes episodically as an acute otitis media, or 'AOM', infection. This is often associated with upper respiratory or chest infections caused by bacteria or viruses in the nose which move up the Eustachian tube (at the back of the nose, that drains naturally occurring fluids from the middle ear) to infect the middle ear cavity. AOM often presents with symptoms of painful earache and fever, and is usually readily diagnosed for treatment with antibiotics.

If AOM goes untreated, infected fluid can build up in the middle ear cavity, eventually causing eardrums to perforate and pus to discharge into the ear canal - referred to as 'AOM with perforation' or 'runny ear'. In this case, additional hearing loss can be caused by the eardrum perforation - the degree depending on its size. However, with appropriate treatment, the infection can clear, the eardrum can repair, and normal hearing resume.

Chronic suppurative otitis media (CSOM) is AOM with perforation and the 'runny ear' discharge that persists for more than two weeks. This is the type of otitis media most associated with permanent hearing loss because of its potential for permanent eardrum damage.

There are significant differences in the way CSOM impacts on Indigenous children when compared to non-Indigenous children in Australia. Among the former:

- Rates of CSOM are significantly higher. A large and significant 2007 national study based on primary health care consultations reported Australian Indigenous children were more than four times as likely to develop CSOM and eardrum perforations as their non-Indigenous peers, with discharging ('runny') ears reported at 40 times the rate of non-Indigenous children,¹²⁵
- CSOM is more likely to result from multiple types of bacterial infection of the middle ear over time, and at the same time,
- Otitis media strikes earlier (sometimes within weeks of birth) and is less likely to heal without treatment. Critically, early age otitis media persists for longer (often throughout childhood), and is more likely to progress to AOM with perforation, then to CSOM, in Indigenous infants and children. Too often, CSOM in Indigenous infants and children is the result of system failure to adequately diagnose and treat the preceding AOM infections, and
- There is a social or collective dimension to CSOM in some Indigenous communities in the sense that many children may be simultaneously affected by CSOM, in a way not experienced in non-Indigenous settings. Many individuals in a group having a hearing loss acts synergistically to compound the impacts of hearing loss to impact on all in the group. This can not only result in greater pressure on the capacity of families, schools, and health services to respond, it can also contribute to 'CSOM-normalisation' in some communities, which becomes a barrier to treatment.

It is noteworthy that CSOM is a 'disease of poverty': most often found in developing countries and in Indigenous populations such as the Maori, Native American, and Inuit of Canada.¹²⁶

Likewise, in Australia, CSOM is one of a group of diseases that are almost exclusively found in Indigenous communities, and particularly remote communities (as discussed in the AMA's 2016 Indigenous Health Report Card in relation to rheumatic heart disease).

In these communities, overcrowded housing, poor essential services, and unhygienic conditions contribute to otitis media striking in infancy, and its persistence as chronic forms of the disease. Because exposure and repeat exposure to bacterial and viral agents are major contributors to this situation, improving overcrowded and unhygienic conditions is key to reducing chronic otitis media's prevalence.¹²⁷

Otitis Media with effusion

In addition to CSOM, otitis media with effusion ('OME' or 'glue ear') is significantly more common in Australian Indigenous children. OME is caused by residual fluid, initially produced in response to an episode of bacterial AOM, building up in the middle ear cavity. The build-up occurs because of swelling in the area at the back of the nose that blocks the Eustachian tubes and stops them draining the middle ear. The swelling can be caused by AOM-related infections of the respiratory tract, other infections of the respiratory tract, and infections of the adenoids and tonsils. Further, swelling caused by passive exposure to cigarette smoke can also cause the Eustachian tubes to block and cause OME.

In most cases, an episode of OME comes and goes within three months. It is estimated that 80 per cent of the world's children under the age of 10 will experience OME. Otitis media with effusion is generally asymptomatic (there is usually no earache like in AOM), and in pre-verbal infants and children (who cannot report other possible symptoms) it can go undetected and untreated for longer periods of time. Further, OME does not usually result in eardrum perforation.

In Australian Indigenous children, OME will often last much longer than three months - referred to as 'persistent OME'. In such cases, the fluid can thicken to a glue-like consistency. If required, the middle ear can be cleaned in surgery through an eardrum perforation usually followed by the insertion of grommets (draining tubes) to ensure ongoing drainage. Over time, these are usually extruded by the ear, and the eardrum heals over.

Occasionally a child will have an episode of AOM while the grommets are in place, with the discharge of pus through the grommets into the ear canal. Without treatment, and if this situation lasts over two weeks, this is classed as CSOM. Exposure to AOM-related bacteria and viruses is a particular risk that must be effectively managed as a part of OME treatment in Indigenous communities, particularly in those where hygiene may be challenged by overcrowded conditions and lack of health infrastructure.

Persistent OME does not lead to permanent hearing loss as often as CSOM, but it can have a profound and life-altering impact on those who suffer it, particularly children. This is because OME is associated with disabling mild to moderate temporary hearing loss for as long as the condition lasts. Just as with chronic acute forms of otitis media, hearing loss can prevent the normal development of auditory processing, even if hearing is eventually restored.

APPENDIX 2

AUSTRALIAN GOVERNMENT RESPONSES TO INDIGENOUS HEARING HEALTH AND OTITIS MEDIA

These Government responses are presented for information purposes only. As noted in the Report Card, the AMA believes there is a need to critically evaluate these programs with a view to building on what is already happening and developing an integrated approach to reducing the impact of chronic otitis media in Indigenous communities throughout the country, with a particular focus on ensuring that the approach is supportive of, and integrated with primary health care delivered by Aboriginal Community Controlled Health Services.

Indigenous Australians and Hearing Australia

The Australian Government first got involved in hearing health to address noise-induced hearing loss suffered by soldiers in World War II. After the War, it began to address hearing loss more broadly and in the wider population. By the 1990s, a statutory authority known as 'Australian Hearing' was established within the Department of Human Services' portfolio.¹²⁸

Following the 2001 House of Representatives' inquiry into Indigenous Health, the Australian Government agreed to better monitor ear disease in Indigenous children at birth, and to aim to test the hearing of all Indigenous infants by three years of age.¹²⁹ Further, it began to improve the access of Indigenous people to Australian Hearing services.¹³⁰

Today, Australian Hearing provides services under the \$470 million per annum (at 2015-16)¹³¹ Australian Government Hearing Services Program, which is administered through the Department of Health through the Office of Hearing Services. This has two streams:

- First, the approximately \$400 million per annum (at 2015-16)¹³² Voucher Program, whereby services are delivered to eligible clients by contracted private service providers and Australian Hearing. Clients are issued with a voucher for hearing services and devices that they can use at a service provider of their choice. Eligible clients include people up to 26 years of age with permanent or long-term hearing loss; veterans, and pension card holders (age, disability, single parent),¹³³ and
- Second, the approximately \$65 million (at 2015-16)¹³⁴ Community Service Obligation (CSO) Program in part aims to meet the needs of people for whom the Voucher Program may not work. This includes people eligible for the Voucher Program but who live in remote areas; people with profound hearing loss and severe communication impairment; and Indigenous people aged over 50, or participating in the Remote Jobs and Communities Program.¹³⁵

Participants in the NDIS under 26 years of age who have hearing needs may be referred to the CSO program. Existing CSO program clients, who also access the NDIS, will continue to have access to the CSO program for as long as they remain eligible.¹³⁶

Australian Hearing provides hearing health services through a network of 110 centres, and through an outreach program it works in around 220 Indigenous communities annually in both urban and remote areas. Visits range from fortnightly to three to four times per year, depending on location and need. Apart from providing clinical hearing services, it also provides training to remote health service staff.¹³⁷

In 2015-16, Australian Hearing had almost 5,000 Indigenous child and young adult clients (aged under 26 years) - about 15 per cent of its total client group under the age of 26 years.¹³⁸ Through the CSO program, expenditure on Indigenous people was \$9.3 million in 2015-16¹³⁹ (about 14 per cent of total CSO program expenditure).

In 2015-16, \$4.4 million was provided for the delivery of the Australian Hearing Specialist Program for Indigenous Australians through outreach sites, including remote communities. A further \$4.9 million was provided to Australian Hearing to deliver hearing services to eligible Indigenous Australians over 50 years of age.¹⁴⁰

Given the greater burden of hearing loss among Indigenous people, it has been suggested an even greater focus on services for Indigenous people is warranted. Moreover, some researchers have argued that the profile of hearing loss that exists in Indigenous communities requires more proactive responses from Australian Hearing that require it to:

- Identify people with hearing loss who would benefit from hearing aids. When hearing loss is normalised, as reported in some Indigenous communities, a 'reactive' approach relying on those with hearing loss to approach Australian Hearing may not be enough to address the extent of invisible hearing loss among Indigenous people,
- Provide more education to Indigenous communities about hearing loss, and ways to minimise its impact on effective communication,¹⁴¹
- Advocate nationally to foster greater awareness of, and responsiveness to, the contribution of hearing loss to the multiple areas of Indigenous disadvantage. As the pre-eminent Australian agency working with hearing loss, it is best positioned to take up such a role to influence other agencies, and
- Expand the role of its research for greater understanding of how to minimise the multiple impacts of hearing loss.

Dedicated responses to Indigenous hearing health and Otitis Media

Northern Territory-specific

A watershed for more significant Australian Government involvement in Indigenous hearing health was the Northern Territory Emergency Response Child Health Check Initiative (NTERCHCI) for Indigenous children under 16 years of age living in prescribed communities. An ear and hearing health program was established within this, and continued under the Closing the Gap in the Northern Territory National Partnership Agreement from mid-2009 to mid-2012. By the end of the program, 9,238 audiology services were received by 5,739 Indigenous children. Around half of children who had an audiological assessment were diagnosed with hearing loss.¹⁴²

The program reported that the prevalence of hearing loss decreased by 10 percentage points among children who had two or more hearing checks. About 60 per cent of children who were diagnosed with hearing impairment at their first check showed some degree of improvement at their last audiology check. Further, the prevalence of middle ear conditions decreased by 21 percentage points among children who received two or more audiology or ENT services.¹⁴³

The Stronger Futures in the Northern Territory Agreement (2012-2022) continues the NTERCHCI program as the Northern Territory Remote Aboriginal Investment: Ear and Hearing Health Program. Under the agreement, audiology services are available to all children under 16 in the Northern Territory (not just in prescribed communities). From July 2012 to June 2016, 9,221 outreach audiology services were provided to 5,357 children and young people, 3,799 ENT teleotology services were provided to 2,434 children and young people, and clinical nurse specialists conducted 3,087 visits to 2,614 children.

From July 2012 to June 2016, the proportion of children and young people with at least one middle ear condition decreased from 82 per cent to 75 per cent between their first and last service. Greater decreases were observed over the longer term. From August 2007 to June 2016, the proportion diagnosed with any ear condition decreased from 78 per cent to 49 per cent between their first and last service.¹⁴⁴

Further, \$33.4 million is being provided through the National Partnership on Northern Territory Remote Aboriginal Investment over 2012-13 to 2021-22, specifically for ear health services in the Northern Territory.¹⁴⁵

While the program has made some welcome inroads into reducing the Indigenous population prevalence of otitis media and hearing loss in Northern Territory Indigenous communities, it nonetheless has encountered significant challenges as discussed in Part 3 of this Report Card.

Australia-wide

Across Australia, as part of the *National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes*, \$58.3 million was allocated over four years from 2009 to 2013 to improving Indigenous eye and ear health.¹⁴⁶ The agreement aimed to increase access to clinical ear health services, including by providing ear and hearing equipment for Aboriginal Medical Services (including ACCHS) combined with training programs for ear and hearing health workers through NACCHO. From this, the *Aboriginal Health Worker Ear and Hearing Health Care Training Manual* was developed.¹⁴⁷

About \$40 million has been further allocated over 2013-14 to 2018-19 to continue these initiatives. In particular, funding of about \$24 million over four years from 2013-14 extends the Healthy Ears-Better Hearing, Better Listening Program, which aims to increase access to clinical ear health services for Indigenous children and youth, with a focus on rural and remote areas.¹⁴⁸

Ongoing activities include the National Indigenous Ear Health Campaign branded as 'Care for Kids' Ears' in July 2011.¹⁴⁹ It includes resources for parents and carers, teachers, and teachers' aides, early childhood and community groups, and health professionals. It also supports the Care for Kids' Ears campaign website, providing information on otitis media and links to downloadable resources.¹⁵⁰

The campaign formed partnerships with 35 community media organisations across Australia, designed to develop and deliver ear health communications at a local community level. In 2013, the campaign was evaluated as making a positive contribution to Indigenous community and health service awareness raising and education around otitis media.¹⁵¹ Funding of \$850,000 continues the campaign from 2013-14 for four years. Over 66,000 Care for Kids' Ears health promotion resources were distributed in 2015-16.¹⁵² Other resources include a 'Talking Book' which provides an overview of key ear health messages in English or one of 22 Indigenous languages.¹⁵³

State initiatives

At the State and Territory level, (and in addition to the New South Wales Aboriginal Ear Health Program discussed in Case Study 1 in Part 3), an Otitis Media Model of Care was launched in Western Australia and a draft Western Australian Child Ear Health Strategy was released in 2016. Western Australia administers ear health projects in the Kimberley region using an integrated, region-wide, planned, and coordinated approach. An Ear Health Protocol has been developed with a strong focus on detection at an early age.¹⁵⁴

In South Australia, an Aboriginal Ear Health Framework was launched in 2017.

Of note, the Queensland Health *Deadly Ears Program* works in partnership with 11 Indigenous communities across rural and remote Queensland, delivering frontline ear health services. It works across the health, early childhood, and education sectors, provides training and development for health care professionals and educators, and undertakes research to improve prevention, treatment, and management of middle ear disease and its impacts on early childhood development. In addition to an administrative support team, the program consists of three other teams:

- The ENT Outreach Team - which provides specialist outreach ENT clinics and surgeries for children with otitis media and associated hearing loss,
- The Allied Health Team - which provides audiology, speech pathology, and occupational therapy services and support to children and families, and
- The Primary Health Team - which provides training and professional development, and support to healthcare professionals and service providers.

A 2015 evaluation of the Program reported that it had shown reductions in presentations of CSOM in both zero-four and five-14 year olds from 2009-2013, and that there was a reduction in presentations of CSOM in all children from 2009-10 to 2013-14.¹⁵⁵

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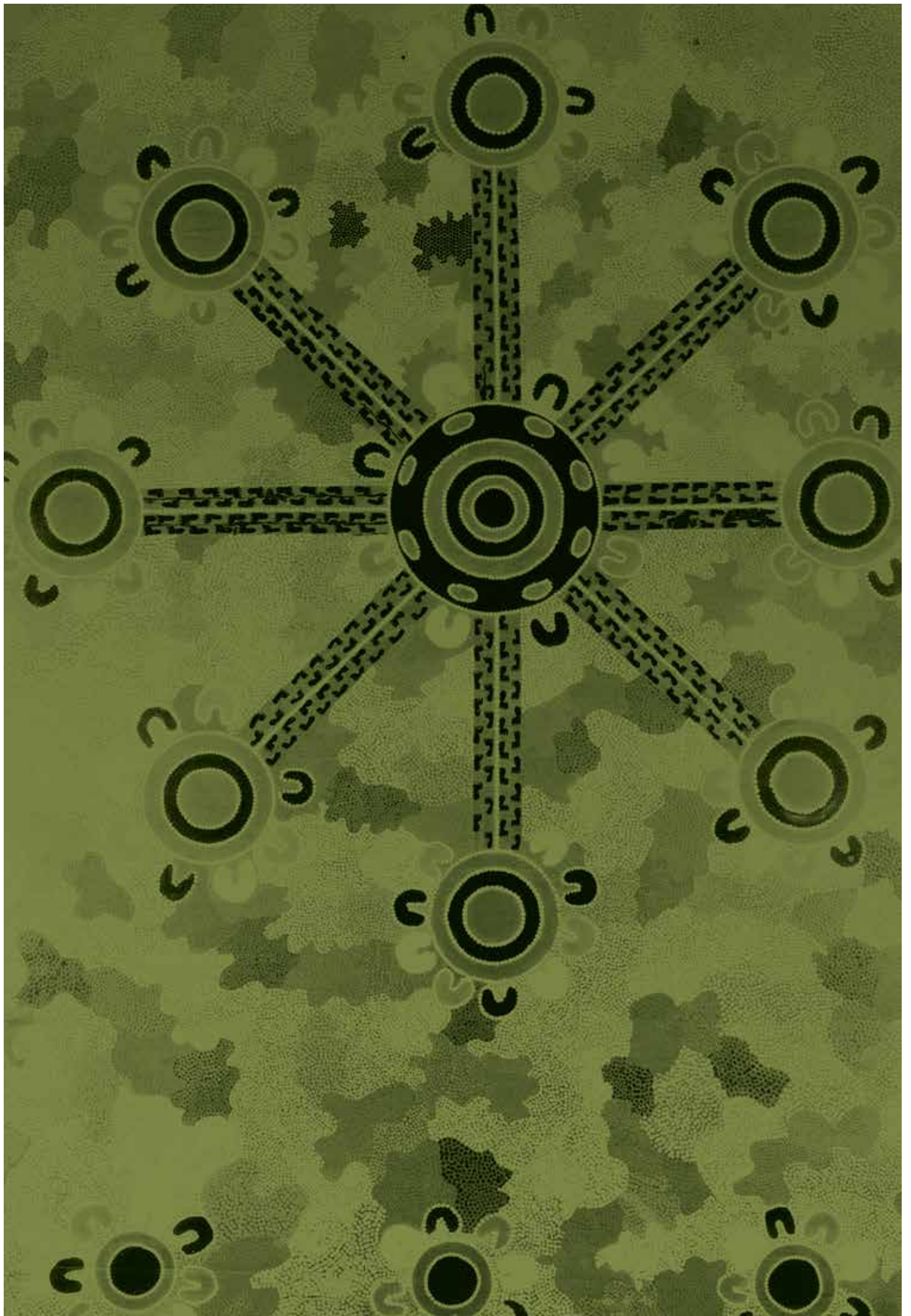
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